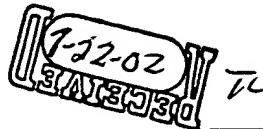


OfficialIn the Claims:

Sub C1 1. (Amended) A satellite constellation comprising:
a plurality of satellites, each of said satellites having an RF ground link
for communicating with a ground station and an optical link for communication with at
least one of the plurality of satellites;

each of said satellites having a reconfigurable optical transmitter for
sending and receiving data streams, each reconfigurable optical transmitter having an
optical carrier associated therewith and a reconfigurable optical receiver;

said plurality of satellites arranged to have a first subset of satellites,
said first subset of satellites are configured to communicate therebetween;

said plurality of satellites arranged to have a second subset of satellites
having at least one different satellite than that of said first subset, said second subset of
satellites are configured to communicate therebetween.

Sub D1 4. (Amended) A satellite constellation as recited in claim 1
wherein said reconfigurable optical transmitter comprises an array of laser diodes.

Sub E1 6. (Amended) A satellite constellation as recited in claim 1
wherein said reconfigurable optical receiver is one from the group consisting of a
Fabry-Perot filter, a wavelength division multiplexer, and a fiber grating-based optical
switch.

Sub F1 11. (Amended) A global communications system comprising:
a plurality of satellites spaced about the earth;
a first subset of said plurality of satellites forming a local area network
over a landmass, said first subset having a first plurality of optical carriers assigned
thereto for intercommunication;
said first subset having a second plurality of optical carriers assigned
thereto for communicating with other satellites outside of said first subset.

Sub D1 13. (Amended) A global communications system as recited in claim 12 wherein said communications table has a plurality of paths for communication between said satellites of said first subset.

21. (New) A method as recited in claim 17 wherein assigning an optical carrier for each route comprises assigning a first set of optical carriers for communication within the first local area network and a second set of optical carriers for communication with other satellites outside of said first local area network.

Sub C4 22. (New) A satellite constellation comprising:
a plurality of satellites, each of said satellites having an RF ground link for communicating with a ground station and an optical link for communication with at least one of the plurality of satellites;

each of said satellites having a reconfigurable optical transmitter for sending and receiving data streams, each reconfigurable optical transmitter having an optical carrier associated therewith and a reconfigurable optical receiver;

said plurality of satellites arranged to have a first subset of satellites, said first subset of satellites are configured to communicate therebetween;

said plurality of satellites arranged to have a second subset of satellites that supercede the first set of satellites, said second subset of satellites having at least one different satellite than that of said first subset, said second subset of satellites are configured to communicate therebetween.

23. (New) A satellite constellation as recited in claim 22 wherein each of said plurality of satellites comprises a communications table.

24. (New) A satellite constellation as recited in claim 23 wherein said communications table has plurality of routes for communicating between satellites in said first subset.

Sub D1 25. (New) A satellite constellation as recited in claim 22 wherein said reconfigurable optical transmitter comprises an array of laser diodes.

26. (New) A satellite constellation as recited in claim 22
wherein said optical transmitter is tunable to generate a plurality of wavelengths.

27. (New) A satellite constellation as recited in claim 22
wherein said reconfigurable optical receiver is one from the group consisting of a
Fabry-Perot filter, a wavelength division multiplexer, and a fiber grating-based optical
switch.

28. (New) A global communications system comprising:
a plurality of satellites spaced about the earth;
a first subset of said plurality of satellites forming a first local area
network over a landmass, said first subset having a first plurality of optical carriers
assigned thereto for intercommunication;
a second subset of said plurality of satellites forming a second local area
network over a landmass, said second subset having a second plurality of optical
carriers assigned thereto for intercommunication;
said first subset having a third plurality of optical carriers assigned
thereto for communicating with said second subset.

29. (New) A global communications system as recited in
claim 28 wherein said second subset has a fourth plurality of optical carriers assigned
thereto for communicating with said first subset.

30. (New) A method of communicating within a satellite
communications system comprising the steps of:
deploying a plurality of satellites;
grouping a first subset of the plurality of satellites into a first local area
network;
superceding said first subset by grouping a second subset of the plurality
of satellites into a second local area network so that at least one of said first subset is
different than said second subset.

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31. (New) A method as recited in claim 30 wherein
superceding said first subset comprises reconfiguring a reconfigurable optical
transmitter for each of the satellites in the second subset.

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32. (New) A method as recited in claim 31 wherein
reconfiguring a reconfigurable optical transmitter comprises changing a plurality of
routes between the satellites in the second local area network relative to the first local
area network.